DISCOVERY

Providing safe learning environment through disaster preparedness in schools

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ABSTRACT

When a natural disaster occurs, children are among the most vulnerable groups, especially those attending School in time of its occurrence. Therefore, preparedness for disaster becomes critical and imperative so as to provide adequate safe learning environment for our School children at all levels of learning. The authors examined among other things: the concept of disaster and types, disaster through ancient history, disaster preparedness, global perspective on disaster in Schools, perception on possibility of disaster occurrence in Schools and training for disaster preparedness in Schools. It was recommended that nation-wide disaster preparedness training and re-training programs for school administrators, teachers, students, and the likes, should be generated, implemented, evaluated, and continuously be renewed and improved. Especially the school administrators who are number one person for the realization of effective instruction and management of the schools should be trained to gain leadership qualities in dealing effectively and adequately with the issues on disaster mitigation, preparedness and management.

Keywords: Education; preparedness; disaster mitigation

1. INTRODUCTION

No task is as important as creating safe learning environment for our nation's children at various level of educational pursuit. Education can only take place through three basic mechanisms namely: the Teacher/Instructor, the leaners and a very conducive learning environment. The environment can pose serious threat via disaster on both the teachers and the learners. In other words, it is a necessity to study disaster education in schools coupled with how it can be avoided totally or its control in situations where it is inevitable.

Education is a human right, universal and inalienable. Education is especially important in enabling people to reach their full potentials and exercise their rights. In most cases these rights disappears or get suspended because of disasters and emergencies. When education is interrupted or limited, students drop out, with negative and permanent economic and social impact for students, their families, and their communities. Whether it is annual floods, a once – in – 5 generations earthquake, the increasing severity of storms and cyclones, water shortages or the slow onset of rising sea water levels.

According to Landesman (2001), disaster is a fundamental reflection of normal life. Hence, it is the consequences of the way the society or the school community is structured. Disaster emanates from certain individuals or communities settling in areas that are susceptible to the impacts of flooding, fire outbreak or volcanic eruption. The magnitude of disaster in terms of death and lost of properties depend on the marginalization of the population of the affected area (Naliaka, Moses and Muthwii 2015).

United Nations Development Programme (2008) pointed out that almost 90,000 death annually worldwide can be traced to disaster occurrence more of which were school disaster that have claimed lives of young growing children and loss of properties worth billions of Dollars. Waugh (2000) postulated that disasters such as flooding and earthquake cannot be stopped but adequate preparedness could be a good mechanism in the reduction of its adverse effects on its occurrence. In most developing countries and under-developed countries, houses are built in areas that are susceptible to flood and other elements of disaster. Schools are built near riversides not even now that there are proliferation of Nursery/primary and Secondary Schools considering little or no inspection of the site and approval of the proposed structure of the Schools. The plan of most of the Schools in developing Countries does not reflect safety and preparedness for disaster.

Since School is a universal institution for the impartation and acquisition of knowledge, it is expected that the School plays a key role in disaster education. If the awareness commences from Schools, it will spread among neighborhood communities and the global world at large. In this wise the School must be well planned and structured against disaster occurrence.

Concept of disaster

According to Xue et al (2003), disaster is a sudden unfortunate extreme event which causes great damage to human beings as well as plants and animals. They further stressed that several injuries occur during disaster while its aftermath effects could be disease outbreak and shortage of food depending on the nature and duration of the occurrence (Uscher-Pines, 2014). American Red Cross, (2012) further affirmed that disaster is an occurrence, either natural or man- made, that causes human suffering and creates human needs that victims cannot alleviate without assistances. However, disasters vary with respect to a number of characteristic, including their frequency, predictability, preventability, imminence, duration and in terms of the extent of their effects.

TYPES OF DISASTERS

Disasters are broadly divided into two types comprising natural and man -made (technological) disasters.

Natural disasters

The natural disasters result from forces of climate and geology. Natural disasters are perhaps the most "unexpected" and costly overall in terms of loss of human lives and resources. During the 1980s, more than 700,000 people lost their lives as a direct result of severe weather, including floods and droughts. Natural disasters with acute onsets include events such as earthquake, flood, hurricane, cyclone or typhoon, tornado, fire, tsunami or storm surge, avalanche, volcanic eruption, extreme cold or blizzard, and heat wave. Natural hazards with slow or gradual onset include drought, famine, desertification, deforestation, and pest infestation. The 1990s and beyond proved to be even more calamitous, as global natural disaster trends rose with increasing rapidity. Among the different types of natural disasters, floods, tropical storms, droughts and earth-quakes are the most destructive, followed by landslides and storms as noted by WHO (2002).

Disasters caused by humans

Although effective methods to contain these threats are possible and used in many countries, others see implementing these disaster mitigation tools as contrary to short-term financial interests (United Nations Institute for Training and Research 1991). Further, excluding warfare, repressive states inflict major loss of life on their own people. The ready availability of weapons and munitions means that small groups with violent intents can terrorize large populations. The roots of terrorist movements are often poverty, inequity and marginalization. These roots are often forgotten in efforts to improve the security of developed countries.

2. DISASTERS THROUGH ANCIENT HISTORY

Entire civilizations have been decimated in an instant. Time and time again, epidemics and pandemics have resulted in sizable reductions of the world's population, as much as 50% across Europe during the fourteenth century bubonic plague (Black Plague) pandemic. Theorists have even ventured to suggest that many of history's great civilizations, including the Mayans, the Norse, the Minoans, and the Old Egyptian Empire, were ultimately brought to their knees not by their enemies but by the effects of floods, famines, earthquakes, tsunamis, El Nino events, and other widespread disasters (Fagan, 1999). A worldwide drought in the eighth

and ninth centuries, caused by shifts in the yearly monsoons and resulting in mass crop failure and subsequent starvation, is now believed to have been behind the fall of both the Mayan empire in Mexico and the Tang dynasty in China (Sheridan, 2007). From a modern perspective, each of the catastrophic events that has occurred as of late, including the December 26, 2004, earthquake and tsunami (over 230,000 killed), the 2005 Kashmir earthquake (80,000 killed), the 2008 Sichuan earthquake in China (68,000 killed), and the 2010 Haiti earthquake (perhaps as many as 200,000 killed), might seem anomalous, but these disastrous events are not close to record-breaking, or even unique, in the greater historical context.

To qualify as a hazard, an action, event, or object must maintain a positive likelihood of affecting man or possibly have a consequence that may adversely affect man's existence. Until humans existed on the planet, there was no incidence or the likelihood not the occurrence of disaster as noted by Wikipedia (2005) but with the appearance of man and his activities, hazards and disasters occurrence became prominent. Archeological discovery has shown that our prehistoric ancestors faced many of the same risks that exist today: starvation, inhospitable elements, dangerous wildlife, and violence at the hands of other humans, disease, accidental injuries, and more. These early inhabitants did not, however, sit idly by and become easy victims. The story of Noah's ark from the Old Testament, for example, is a lesson in the importance of warning, preparedness, and mitigation (Covello & Mumpower, 1985).

Today, this methodology is referred to as decision analysis, and it is a key to any comprehensive risk management endeavor. Although Herculaneum, which was at the foot of the volcano and therefore directly in the path of its lava flow, was buried almost immediately, the majority of Pompeii's population survived. This was because the citizens of Pompeii had several hours before the volcano covered their city in ash, and evidence suggests that the city's leaders organized a mass evacuation. The few who refused to leave suffered the ultimate consequence, and today lie as stone impressions in an Italian museum.

3. WHAT THEN IS DISASTER PREPAREDNESS?

It includes actions designed to enhance the ability to undertake emergency actions in order to protect property and contain disaster damage and disruption, as well as the ability to engage in post-disaster restoration and early recovery activities (National Research Council NRC 2006). Preparedness is commonly viewed as consisting of activities aimed at improving response activities and coping capabilities. However, emphasis is increasingly being placed on recovery preparedness—that is, on planning not only in order to respond effectively during and immediately after disasters but also in order to successfully navigate challenges associated with short- and longer-term recovery.

FEMA (2002) defined disaster preparedness as the leadership, training, readiness and exercise support, and technical and financial assistance to strengthen citizens, communities, state, local, and tribal governments, and professional emergency workers as they prepare for disasters, mitigate the effects of disasters, respond to community needs after a disaster, and launch effective recovery efforts.

Preparation for Disaster

Disaster and crisis preparedness is an important part of every aspect of human engagements. As such, crisis management is a continuous process in which all phases of the plan are constantly reviewed and revised. Good plans are never finished. They are always updated based on new experience, research and changing vulnerabilities (Kennedy, 2004). Like all other institutions, schools cannot afford to ignore the necessity of crisis and disaster preparedness most of our public schools rarely prepare for disaster occurrence. According to Fullen (2013), there are at least two major purposes to schooling. These are: facilitating the development of both cognitive/academic and personal/social skills. Crisis situations have the ability to interfere with both of these goals (Cowen & Hightower, 2010). Crisis intervention is not only in line with the purposes of schooling, but is also essential to continued learning (Brock, Sandoval & Lewis, 1996). Crises occur at any time and with varying degrees of severity. In the event of a crisis situation, calm, responsibility and proactivity are essential to the effective management of the emergency (Decker, 2007)

Global Perspective on Disasters in School

Britain had enabled her to recognize the first signs of a tsunami (Goklany, 2012). In developing countries like Kenya, the impact of natural disasters is especially high. Disasters in developing countries frequently result in higher death rates and destruction than similar disasters in developed nations. Because developing countries often lack adequate resources for disaster preparedness and response, children in those countries are especially vulnerable (Spiegel, P. B., Le, P., Ververs, M. T., & Salama, P. 2007).

Research suggests that children (defined as ages 2-19, with a more narrow definition of adolescents as ages 10-19 (World Health Organization, 2007]) are more severely impacted by disaster than adults (Norris et al., 2002). Being young and still rapidly developing in the areas of mental, social and physical health, children are especially at risk (Madrid et al., 2006; Markenson et al.,

2006). It is believed that children as young as five years old are cognitively capable of understanding the effects of disaster (Pynoos, Steinberg &Raith, 1995). However, trauma during the early years can affect individuals, families and communities for years to come (The Red Cross, 2002). Emerging research highlights an urgent need to understand how children are uniquely affected by disasters (Dodd, R. Y., Notari, E. & Stramer, S. L. (2002); La Greca et al., 2012), and a need for theories and models to guide intervention and research (Silverman & La Greca, 2012).

Readiness and Ability to respond to disaster in Schools

According to Naliaka, Moses, and Muthwii (2015) the protection of children in schools goes beyond fences and related security measures. There is the need for the community to partner with the teachers to assure children's safety as well as change of mental attitude in children themselves. Every school is unique by virtue of its design, location and students, and each has its own history and culture. Some schools are relatively open and safe; others are highly protected but still unsafe from potential hazards from within the school. In the past few years, many schools have experienced fires in which property worth millions were destroyed and, regrettably, students' lives lost. Major crisis situations such as arson attacks, assault and rape, road accidents, laboratory accidents, terror attacks, and kidnap of Chibok girls by Boko-haram terrorists among others, have raised concerns on the ability of the government to protect and provide for the citizens in institutions of learning.

It is common knowledge, however, that the best form of defense in any bad situation is to make prior plan to return stability to the situation. Such measures of preparedness must be constantly reviewed to insure its efficiency. Schools must analyze their own abilities to respond effectively to crisis situations. Nichols (1997) notes that today's schools are vulnerable to many of the same threats that plague societies in general. The reality of the contemporary society, along with its academic institutions, is that there are few places where one can assume to be safe. Crisis situations occur more frequently in school systems, and many systems are not prepared to handle the crisis effectively.

Naliaka, Moses and Muthwii (2015) asserted that schools have not constituted safety committees. Neither do they have enough plans for dealing with crises. This ideally means that most schools are dangerously exposed to adverse impacts of disasters. Most of them have not fully implemented safety standards and guidelines strategies due to inadequate funds. Notably, in most schools fire extinguishers are located inside the buildings, administrative blocks, dormitories and kitchen contrary to the safety standards and guidelines due to fear of theft of the gadgets. Fire extinguishers must be located in strategic places, especially at the exit of every block if they have to serve the purpose they are meant for.

Perception on Possibility of Disaster Occurrence in Schools

Gone are the days of believing that disasters cannot happen in schools. Schools have become more prone to major crisis situations on a more frequent basis than most care to consider. Still some teachers and communities may believe that crisis events will never happen in their schools. For those who choose to prepare, the relevant question is not "Will an emergency happen in my school?" but "When the emergency occurs, how prepared will we be to handle the situation?" (Hull, 2000). Failure to consider the possibility of a crisis event occurring does not exempt anyone from the possibility of a crisis occurring in their school.

Training for Disaster Preparedness

Preparation for and response to crises relies on people understanding the policies and procedures and knowing what they are expected to do. All these are achieved through training. Maintaining preparedness is an ongoing process that involves debriefing after crises, periodic review and updating and ongoing training. To fortify against potential threats, schools need to take steps to prepare and respond in an organized fashion, preparing crisis plans as well getting involve in organizing and training school crisis teams (Allen et al., 2012; Allen et al., 2012; Brock et al., 2001; Pagliocca & Nickerson, 2001).

A shift in professional thinking should move from crisis response which involves provision of physical needs to where there is a provision oF mental health needs (Lindemann, 2001, 1979; Weaver, Dingman, Morgan, Hong & North, 2000) and, more specifically, providing for children's mental health needs (Terry, 1979, 1981, 1983). Putting these factors into consideration, the study sought to provide a historical background of school-based crisis intervention and the growth of safe school planning.

4. CONCLUSION

Amongst all the public facilities, children in schools are among the most vulnerable groups during any disaster. A larger number of municipal and privately managed schools operate in various urban centres, many of which are built in congested areas and are exposed to various hazards. Further adding to the vulnerability is the improper sitting of these buildings. Inadequacies in the

structure and lack of preparedness measures can have disastrous consequences in the event of any disaster outbreak which will eventually defeat the aim of the school being a citadel of learning turning it to a place of horror. Interventions both structural as well as non-structural to reduce vulnerability thus become very important for schools as well as all lifeline structures. The non-structural measures include, communicating the risk, creating awareness and building capacities in preparedness and mitigation, school and neighborhood preparedness plan as well as enforcement of the plan.

Recommendations

It is noted that if the following recommendations are implemented, our schools would be better prepared for any disaster occurrence:

1. Nation-wide disaster preparedness training and re-training programs for school administrators, teachers, students, and the likes, should be generated, implemented, evaluated, and continuously be renewed and improved. Especially the school administrators who are number one person for the realization of effective instruction and management of the schools should be trained to gain leadership qualities in dealing effectively and adequately with the issues on disaster mitigation, preparedness and management.

2. Disaster management team should be set up to synergize with the School administrators on the implementation of safety policies guiding Schools against disaster occurrence and its management when it is inevitable.

3. Schools should be sited where the students really can gain the awareness and knowledge of protecting the nature and environment and learn the ways of protecting themselves and the others from disasters especially from disaster prone areas. Therefore, not only some instructional units, but also some obligatory courses and subjects towards mitigation of the hazardous effects of disaster should be added to school curriculum.

4. The administrators should make special efforts to create awareness for disasters and build a disaster resistant culture at schools. The School Administrators together with the school staff should try to ensure that the staffs, students and other personnel know how to act and behave in the case of before-during-aftermath disaster stages. To achieve this, many activities through theatres, movies may be staged; workshops, conferences, seminars and meetings may be organized; some contents may be arranged; some studies together with the institutions of higher education may be mounted.

5. There should be collaborative efforts of the host community and the School in the implementation of disaster management policies and decisions.

6. Notably, in most schools fire extinguishers are located inside the buildings, administrative blocks, dormitories and kitchen contrary to the safety standards and guidelines due to fear of theft of the gadgets. Therefore School administrators should ensure that Fire extinguishers are located in strategic places, especially at the exit of every block if they have to serve the purpose they are meant for.

Conflict of interest

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